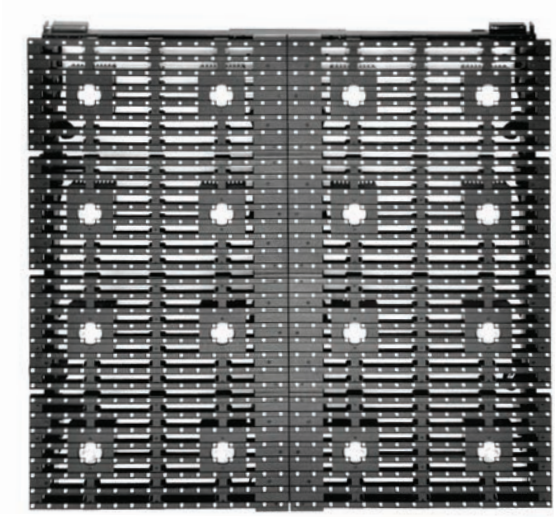
User Manual

Hybrid-18



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01 Safety Information:

WARNING!
Read the safety precautions in this section before installing, powering, operating or servicing this product.

The following symbols are used to identify important safety information on the product and in this manual:

WARNING!
Safety hazard. Risk of severe injury or death.

WARNING!
Refer to manual before installing, powering or servicing.

WARNING!
Hazardous voltage. Risk of lethal or severe electric shock.

WARNING!
Hot surface. Do not touch.

WARNING!
Fire hazard.

WARNING!
Emission hazardous to eyesight.

This product is for professional use only. It is not for household use.

This product presents risks of severe injury or death due to fire hazards, electric shock and falls.

Read this manual before installing, powering or servicing this product, follow the safety precautions listed below and observe all warnings in this manual and printed on the product.

If you have questions about how to operate the panel safely, please contact your Radiant supplier.

PROTECTION FROM ELECTRIC SHOCK

· Connect the product to AC mains power within the range 90- 264 V nominal at 50 or 60 Hz only.

· Disconnect the product from power when not in use.

· Always ground (earth) the product electrically.

· Before using the product, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.

· Do not use the product if the power cable or a power plug is in any way damaged, defective or showing signs of overheating.

· Do not attempt to open any cover.

· Refer any service operation not described in this manual to a qualified technician.

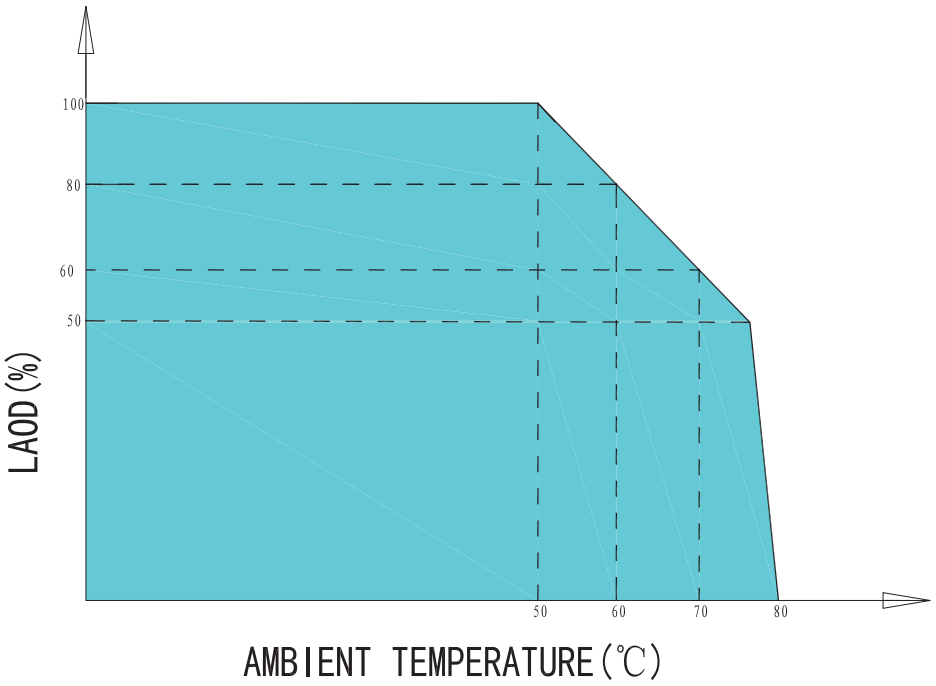
PROTECTION FROM FIRE

Do not stick filters, masks or other materials directly onto LED modules.

Do not modify the product in any way not described in this manual.

Install only genuine Radiant parts in or on the product unless an alternative is described in this manual.

Do not operate the product full load if the ambient temperature of power units (Ta) exceeds 80˚C (176° F).



PROTECTION FROM INJURY

Create an installation by installing panels at the top and working downwards. Disassemble an installation by removing panels at the bottom and working upwards.

Check that all external covers and rigging hardware are securely fastened.

Block access below the work area and work from a stable platform whenever installing, servicing or moving the product.

Important warnings

Maximum and minimum ambient temperature:
The maximum ambient temperature for the LED wall is 60 °C; the minimum temperature is -20 °C.

High leakage current:
The combination of power boxes in an installation results in increased levels of Leakage current. In order to avoid risk of electric shock due to high leakage current, proper grounding of the installation is required.

This equipment MUST be earthed:
In order to protect against risk of electric shock, the installation should be properly grounded. Defeating the purpose of the grounding type plug will expose you to the risk of electric shock.

Power system

Mains cords:
The power cords delivered with this system have special properties for safety. They are not user Serviceable. If the power cords are damaged, replace them only with new ones. Never try to repair a power cord.

Data cables:
The data cables provided with this system have special properties for safety. They are not user serviceable. If the data cables are damaged, replace them only with new ones. Never try to repair a data cable. Per requirements of the National Electrical Code® in the USA, the length of a data cable must not exceed 100 m (332 feet). Avoid exposure of data cables to accidental contact with lightning or power conductors.

Hybrid LED Panels cannot be hot swapped:
Always disconnect the power cord from the control box before connecting or disconnecting the cable string or one of Hybrid LED Panels.

02 Specification:

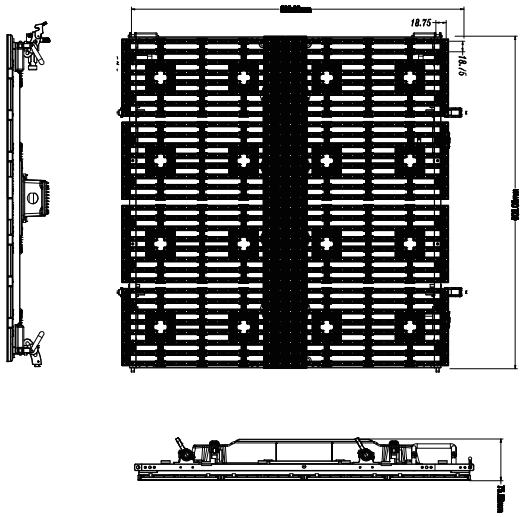
The Hybrid series is the world's first LED video display which integrates the functions of the spotlight. The LED display and spotlight are in independent control which ensures them to be used jointly as well as independently. Depending on the unified structure designing, the Hybrid series can be used jointly with all the MC series.

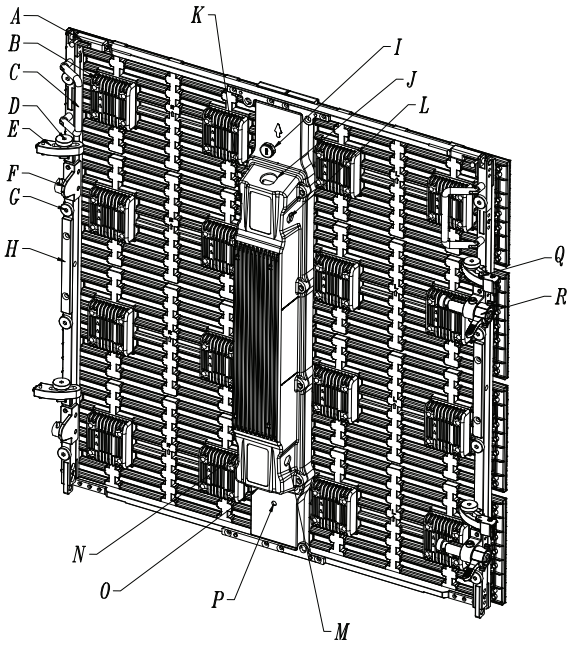
Hybrid Specification:

	LED Display	LED Spotlight
Pixel Pitch	18.75mm	150.0mm
LED Type	3in1 SMD	3W High power LED
Brightness(Nit or CD/m^2)	Cree 3435 3000 Silan 3535 3700	77LM
Transparency	27%	N/A
Module Size(mm) W×H×D	600.0×600.0×75.0	N/A
ModuleArea	0.36m^2	0.36m^2
Pixels/Module	32×32	4×4
Pixels/m^2	2844	48
Viewing Horizontal/Vertical	120°	20° or 8° optimal
Weight/Module	9kg	9kg
IP (Front/Reverse)	IP65	IP65
Color Depth	16 bit	14bit
Processing	1280×1024/1920×640	43520(dot)
Scan	Static	Static
Refresh Rate	4000Hz	2000Hz
Max Power/Module	110W	70W
Working Temperature	-20 to 45℃	-20 to 45℃

Dimensions:

All dimensions are in millimeters

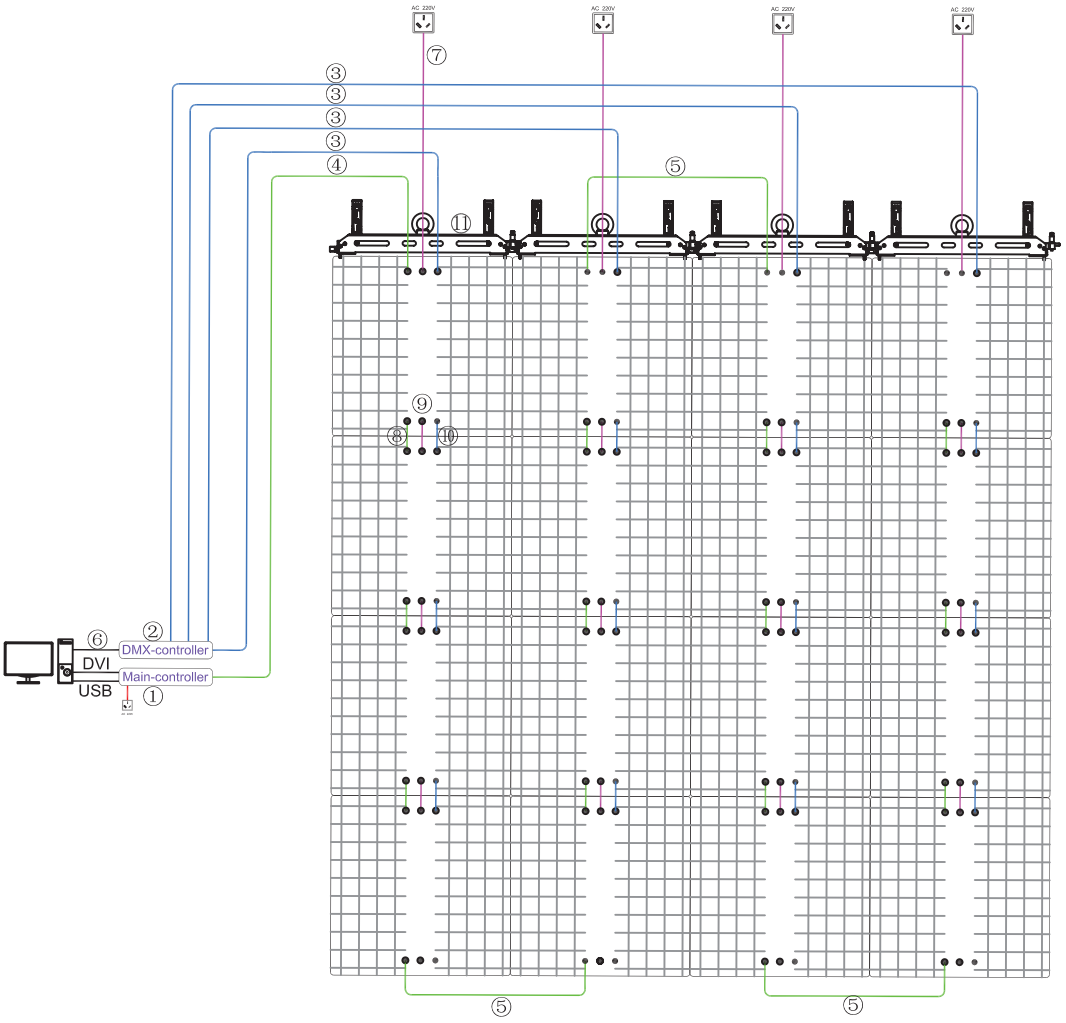




Backside diagram

A. Horizontal spring pin	J. 3 pin power in
B. High Power LED	k. 10 pin data in
C. Holder	L. 4 pin DMX in
D. Curve regulator	M. 4 pin DMX out
E. Curve holder	N. 10 pin data out
F. Socket for horizontal fix	O. 3 pin power out
G. Screw of fix bar	P. Indicator
H. Fix pad	Q. Curve holder
I. Ventilate valve	R. Latch for horizontal fix

03 Connection:



Accessories quantity for (4*4) tiles:

①. 1× Sending card (SDR-30001)
1× DVI cable
1× USB cable
②. 1× DMX controller (SDR-00001)
③. 4× CAT-5 (CAT-30011)
④. 1× CAT-5 (CAT-30001)
⑤. 3× CAT-5 (CAT-00911)
⑥. 1× CAT-5 (CAT-02001)
⑦. 4× Power cable (PWC-43003)
⑧. 12× CAT-5 (CAT-00411)
⑨. 12× Power cable (PWC-40033)
⑩. 12× CAT-5 (CAT-00411)
⑪. 4× Hanging Bar(RIG-06022)

Hybrid-18 address setting:

DMX512 IN

Dot4 address10~12	Dot3 Address7~9	Dot2 Address4~6	Dot1 address1~3
Dot8 Address22~24	Dot7 address19~21	Dot6 address16~18	Dot5 address13~15
Dot12 Address34~36	Dot11 Address31~33	Dot10 Address28~30	Dot9 Address25~27
Dot16 Address46~48	Dot15 Address43~45	Dot14 Address40~42	Dot13 Address37~39

Panel 1

Dot4 Address58~60	Dot3 Address55~57	Dot2 Address52~54	Dot1 Address49~51
Dot8 Address70~72	Dot7 Address67~69	Dot6 Address64~66	Dot5 Address61~63
Dot12 Address82~84	Dot11 Address79~81	Dot10 Address76~78	Dot9 Address73~75
Dot16 Address94~96	Dot15 Address91~93	Dot14 Address88~90	Dot13 Address85~87

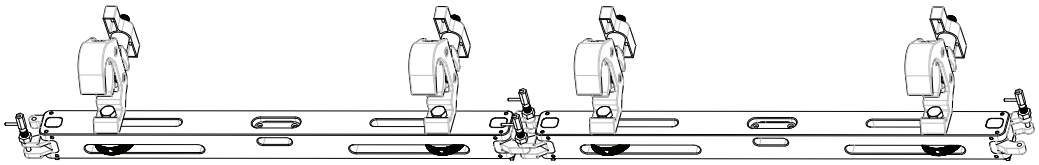
Panel 2

Hybrid-18 address setting:

1.Hybrid-18 address distribution(See left chart): each spotlight occupies three addresses. Address 1 is located at upper right corner and last one (Address 48) is at lower left corner.

2.Hybrid series cascading: Our DMX 512 chip can't be set, the first address of signal input is address1,keep casca -ding. Address automatically increases.

Figure 1: Straight installation



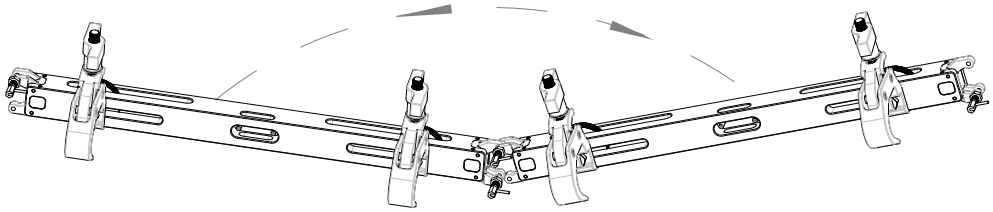
Step 1: Match the holes in straight line.

Step 2：Turn the knob and fit securely.

Step 3：Push the bolt in.

Note: Adjust the height of header with the pulley.

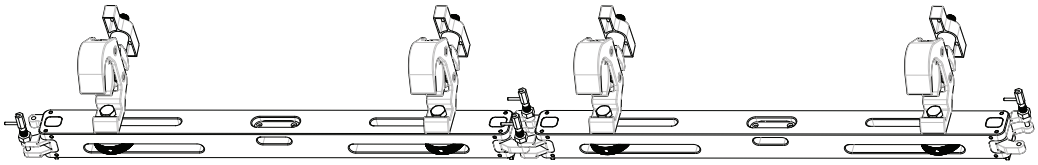
Figure 2: Arc installation



Step 1: Match the holes in the angle.

Step 2: Turn the knob and fit securely.

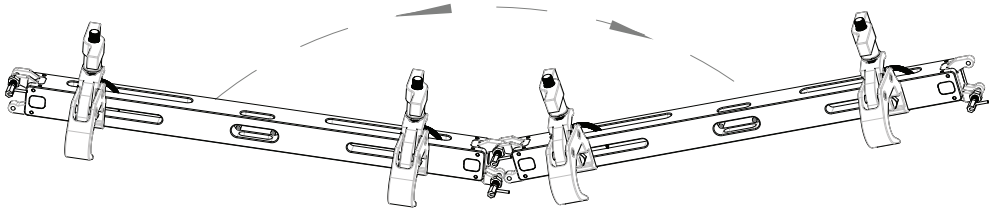
Figure 1: Straight installation



Step 1: Match the holes in straight line.
Step 2：Turn the knob and fit securely.
Step 3：Push the bolt in.

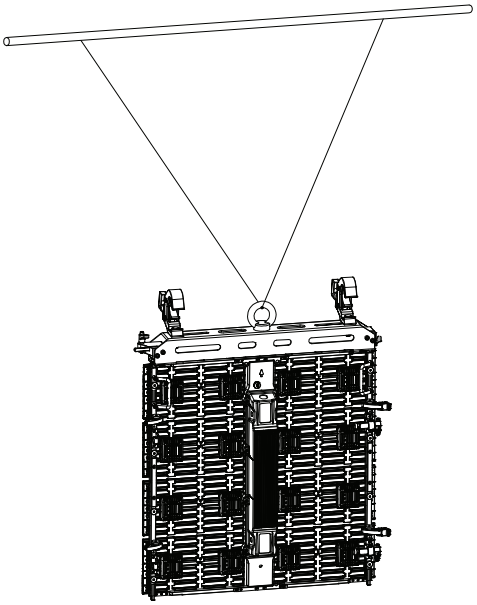
Note: Adjust the height of header with the pulley.

Figure 2: Arc installation



Step 1: Match the holes in the angle.
Step 2: Turn the knob and fit securely.

Figure 3: The function of ring

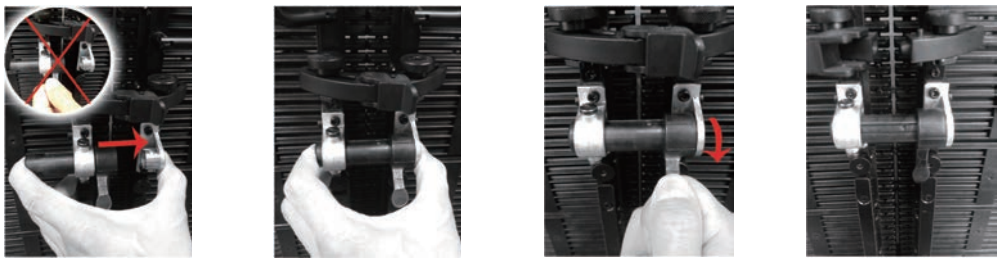


Note: The ring suggest to be used in big show, special stage design, high level background display…
Headers suggest be used in car show, TV show…some close view distance display.
The ring is not included in standart accessary rist.

05 Physical Connection:

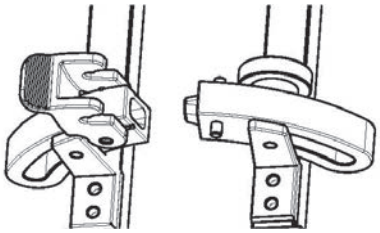
Straight installation

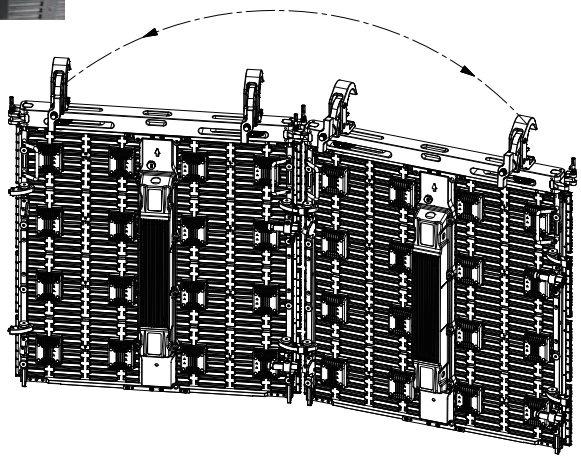
Step1:



Step2:

Curve Installation



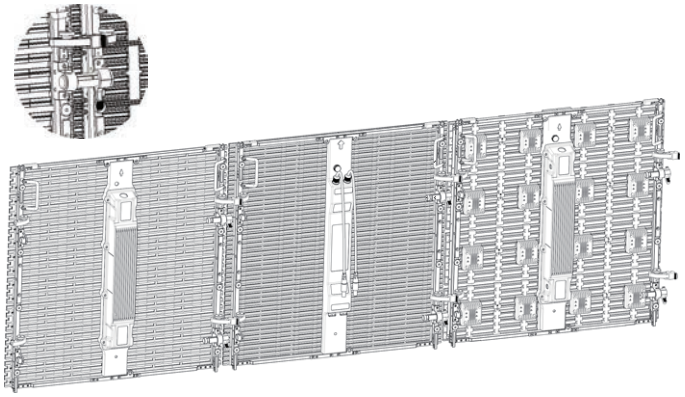


1. Loosen the knob and buttons on the header and panels.
2. Adjust the angle.
3. Tighten the knob and bottom.

Note:

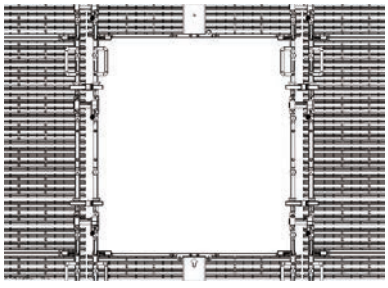
Headers can reach the angle of 15°both front and back direction.
Panels can reach the angle of 15°.
For perfect visual effect,seamless curveable is 15°(Both front/back direction).

Hybrid&MC-H&MC-F mixing using



Note: Depending on unified frame structure,all of hybrid families and MC series can be integrated together.

Hollow-design



1. Install all the panels securely.
2. Loosen six buttons and take down the panel.
3. Connect the cables above and below nearby.

06 Accessories

Name : CAT-5
Part No. : CAT-30011
Dimesion : 30000mm
Weight : 1.3kg

Name : CAT-5
Part No. : CAT-30001
Dimesion : 30000mm
Weight : 1.33kg
Max Length : 100000mm

Name : CAT-5
Part No. : CAT-00911
Dimesion : 970mm
Weight : 0.042kg

Name : CAT-5
Part No. : CAT-02001
Dimesion : 200mm
Weight : 0.12kg
Max Length : 2000mm

Name : CAT-5
Part No. : CAT-00411(10pin)
Dimesion : 300mm
Weight : 0.03kg

Name : CAT-5
Part No. : CAT-40411(4pin)
Dimesion : 300mm
Weight : 0.03kg

Name : Power Cable
Part No. : PWC-43003
Dimesion : 30000mm
Weight : 3.20kg
Max Current : 12A
Max Capacity : 8 tiles of Hybrid

Name : Power cable
Part No. : PWC-40033
Dimesion : 250mm
Weight : 0.12kg
Max Current : 12A

Name : Header
Part No. : RIG-06022
Dimesion : L600×W171.1×H53mm
Weight : 3.80kg
Material : Cold Rolled Steel
Max Capacity : 30 tiles of Hybrid

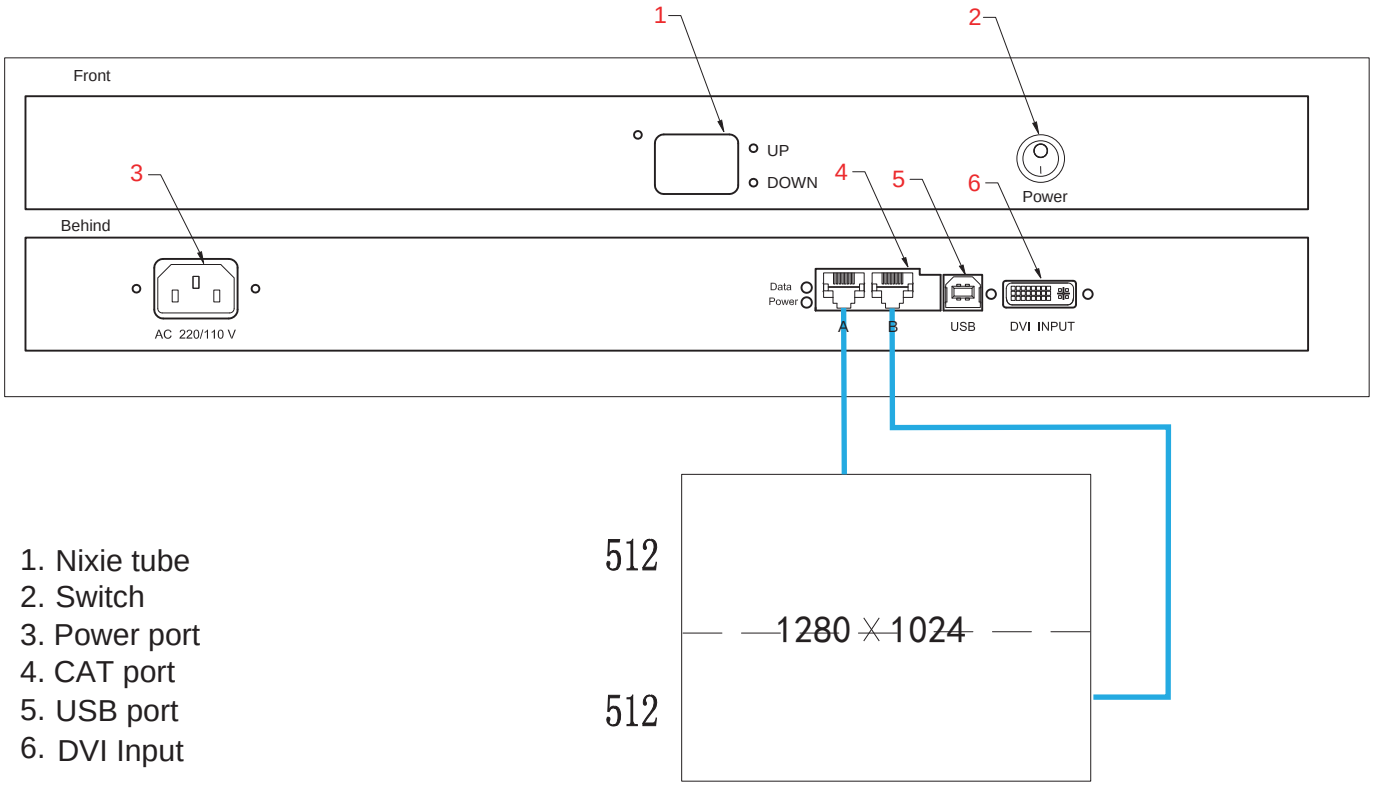
07 Control System:

The control system of Dot consist of receiving card and sending card.Receiving card is integated with LED panels.

Specification

Working Voltage	90～260VAC
Power	＜10W
Working temperature	-30℃～ 50℃
Input port	DVI
Output ports number	2 ports
Communication port	USB/RJ45
Max resolution	1024x768
Data transmission port	1000M Ethernet
Material	SPCC
Dimension	L280*W 175*H 50mm
Weight	1.48kg

Main controller (SDR-30001)



1. Nixie tube
2. Switch
3. Power port
4. CAT port
5. USB port
6. DVI Input

Software:

Please read software manual or download from the link as below:

DMX Controller

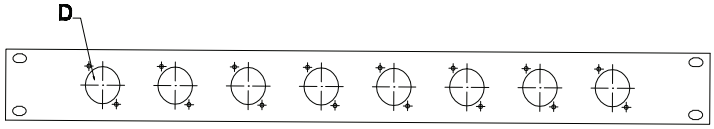
Hybrid spotlight is controlled by DMX controller (SDR-00001)

Specification

Model	LW-ANC-8 ×512
Power requirement	AC110/220
Cable	CAT-5
Protocol	DMX
Data connector	3 pin XLR female
Compatible	ARTNET standard protocol
Support DMX channels	Full 4096 DMX channels
Temperture	0℃-50℃
Humidity	0-95%,non-condensing

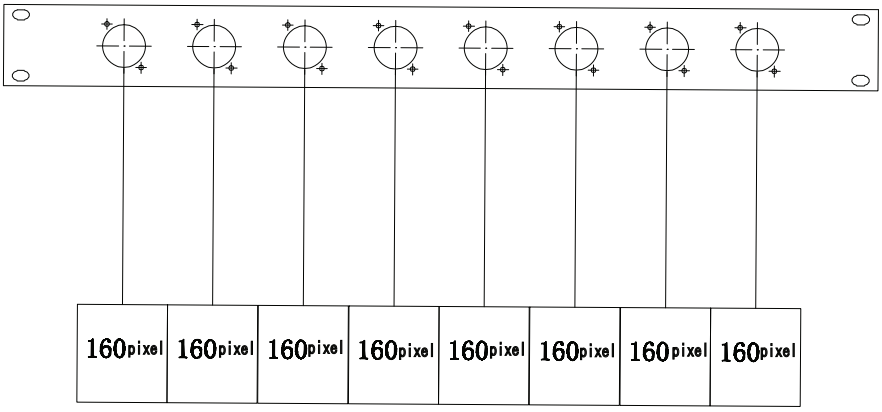
DMX controller (SDR-00001)

Front



Behind

unit: pixels



A. Power port
B. Signal port
C. Down button
D. Signal port

Figure 1: Replacement of LED strips

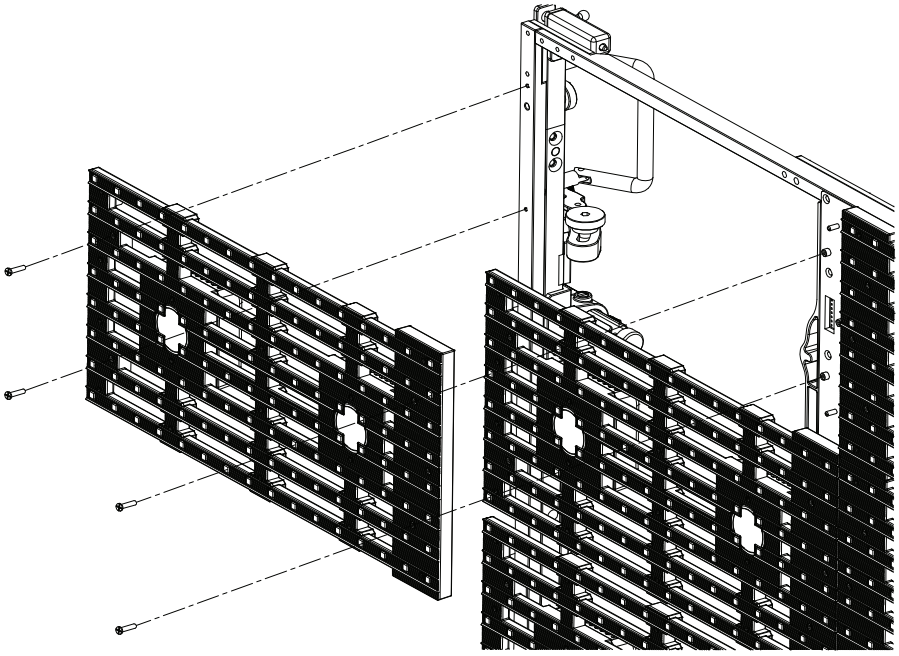
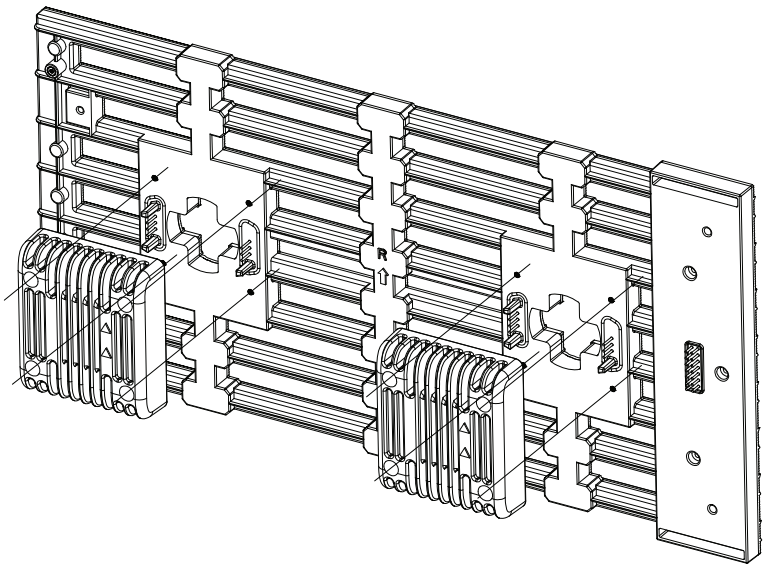
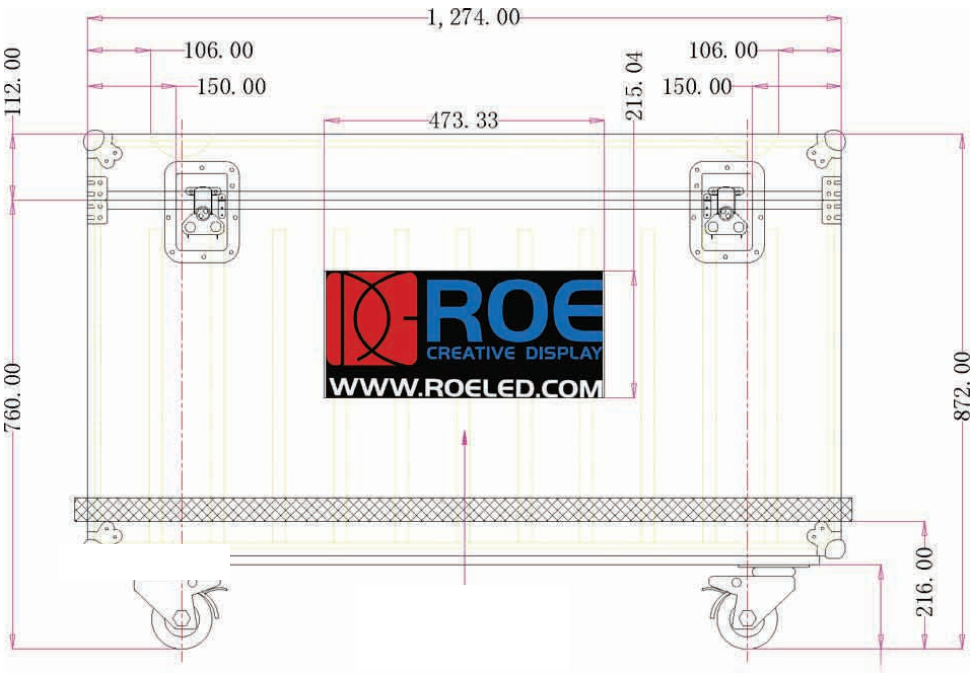


Figure 2: Replacement of LED spotlight.

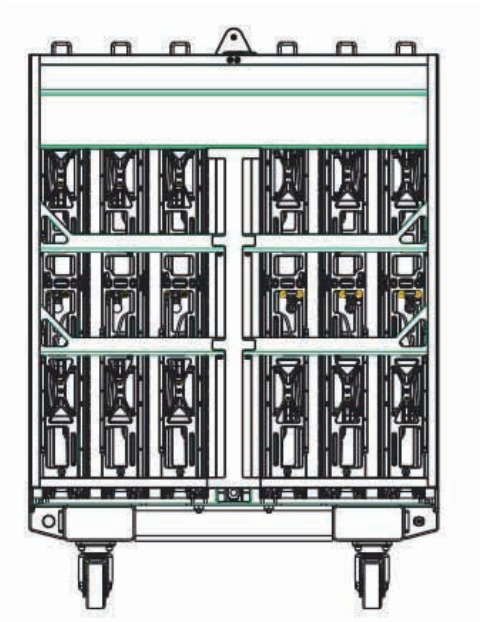


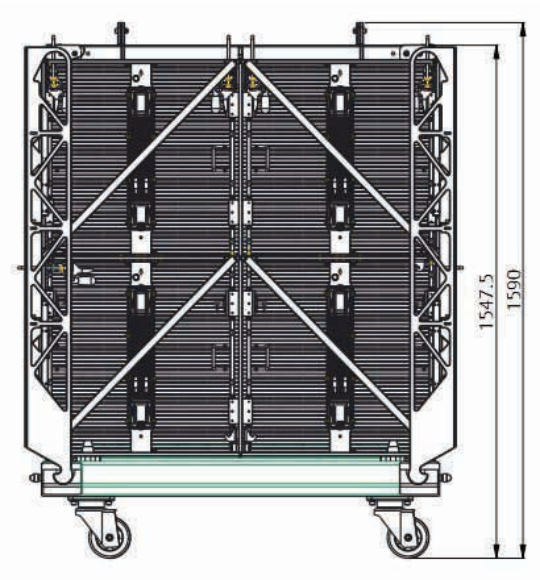
12 pcs LED panels per flightcase

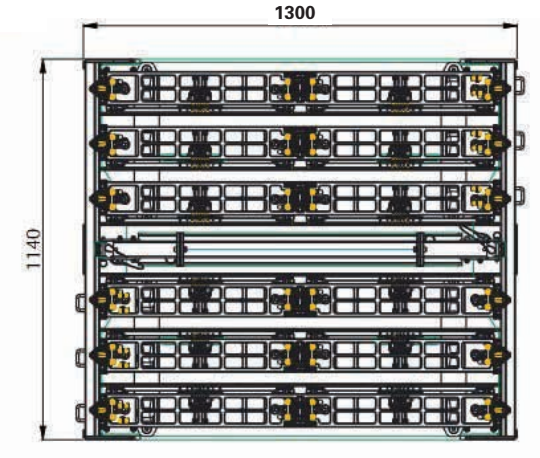


10 Tour Frame:

Frame dolly for 4*6 pcs LED panels







Note:

2*2 pcs LED panels as a column, fixed with framework on the backside.
One hanging bracket fixing one column panels can be easily carrying and quickly installation.

The end

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